

# Cultural Considerations in the Formal Process of Simulation Curriculum Adaptation

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# Cultural Considerations in the Formal Process of Simulation Curriculum Adaptation: A Scoping Review

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**Summary Statement:** Transborder curriculum partnerships in health professions education have been increasing in numbers in recent years. These partnerships present unique challenges when transferring curricula from one context to another. It has been noted that cultural differences between institutions, faculty, staff, and learners can have profound effects on collaboration. Given the significant need for context and fidelity (especially relative to cultural considerations) in healthcare simulation education, there are gaps that need to be addressed in the transfer of these curricula. A scoping literature review was conducted examining recently published articles with relevance to simulation curriculum design or adaptation in transborder contexts to determine to what extent cultural elements are considered in the design and adaptation of simulation-based education in transborder curriculum partnerships. This review resulted in 19 studies requiring full-text review. Studies represented every region of the world with both near and distant proximity of partnering parties. From the reviewed studies, 8 categories related to curriculum adaptation were identified. These categories, when compared with the themes present in Campinha-Bacote's model of cultural competency, showed complete overlap with the 5 themes of the model plus an additional theme complementary to the model. This scoping review demonstrates that cultural considerations clearly play a role in the adaptation of simulation curricula in transborder healthcare curricular partnerships, but further research is needed to further define the exact nature of that relationship. (*Sim Healthcare* 00:00–00, 2023)

**Key Words:** Cultural considerations, simulation curriculum adaptation, simulation curriculum adaptation, cultural competency, transborder healthcare.

In recent years, curriculum internationalization has received increased attention.<sup>1</sup> There is a growing call for robust methods of curriculum adaptation and transfer between transborder collaborations in many fields, specifically medical education.<sup>1–3</sup> Transborder collaborations include any educational partnerships where curricula may be shared across regional, national, or international boundaries.<sup>4</sup>

In addition, medical education has been experiencing an evolution as curricula continue to be further integrated between basic sciences, clinical practice, and simulation-based education (SBE).<sup>5</sup> Despite the increase in the use of simulation and its direct relevance to patient care, recent work on transnational curriculum adaptation has focused on didactic delivery.<sup>6,7</sup> With the increase in the transnational transfer of SBE curricula, the ability of SBE to provide appropriate fidelity furthers the authenticity of the subject matter.<sup>8</sup> Indeed, the anticipated healthcare delivery

practice environment is essential when designing SBE for an engaging and effective learning environment.<sup>9</sup>

According to Waterval et al,<sup>10</sup> the core of transborder collaborations is formed by the curriculum, but not staff, students, or faculty. They also signal that cultural differences within the collaborations, as well as within each of the institutions, can significantly affect the outcome of these collaborations. According to their work, a continuous conversation regarding content, didactics, structure, and many other elements of the curriculum itself is a key element to the success of these partnerships. Furthermore, the curriculum must strike a balance between equivalence with the original curriculum and local adaptation to meet the specific needs of the institution where the curriculum is imported.<sup>4</sup> In addition, Giuliani et al<sup>11</sup> have suggested that local implementation of a transferred curriculum can be an intricate process with increasing difficulty as the curricula get larger, more complex, and increasingly prescriptive. Given the need for conceptual, environmental, functional, and psychological fidelity, the effort required for local implementation of a transferred curriculum requires significant adaptation.

Waterval et al<sup>10</sup> and Giuliani et al<sup>11</sup> also concluded that examination of the fidelity of SBE is key to the adaptation process. Through Kern's process of performing a needs assessment in any simulation curriculum, many common elements of fidelity are considered.<sup>12</sup> The practice environment, the process of care, and the relationships between different professions are often considered elements in any curriculum. This holds true and is perhaps even more critical in a curriculum being implemented in or adapted to a new context. The role that culture may play in these adaptations is, however, unclear.

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Campinha-Bacote<sup>13</sup> describes a process by which culture and cultural competency play a role in the delivery of health-care services. Cultural awareness, encounters, knowledge, skill, and desire are used thematically in this process to describe elements that may lead to an individual becoming “culturally competent” in the delivery of healthcare services.<sup>14</sup> To add further depth to this, Matsumoto and Juang<sup>15</sup> provide a definition of culture as the set of values, beliefs, and behaviors shared by a group of people and communicated from one generation to the next. When examining crossborder partnerships the borders described are geographical or national in nature, providing further focus to this review.<sup>10</sup>

Initial searches through the literature indicate that transborder curriculum partnerships have been explored by looking at the structural, cultural, healthcare practice, and educational differences in health professions education.<sup>1,4,7,10,11,16–19</sup> However, the unique needs related to adaptation and transfer of SBE, particularly as it relates to the intersection of culture in education and practice are less prevalently or completely studied.

The aim of this scoping review is to examine the current literature through the lenses of Matsumoto and Juang<sup>15</sup> and Campinha-Bacote<sup>13</sup> to determine to what extent cultural elements are considered in the design and adaptation of SBE in transborder curriculum partnerships, and in the process of curriculum design and adaptation, these elements should be inserted or considered.<sup>13,15</sup>

## METHODS

A scoping review was conducted of published peer-reviewed articles to collect the current evidence and practice of cultural considerations in simulation-based curriculum transfer.<sup>20</sup> This review was specifically looking for descriptions of cultural elements affecting the design or implementation of the SBE curriculum. A scoping review was chosen to examine the published peer-reviewed literature since 2016 for key characteristics of cultural competency related to curriculum design of SBE.<sup>21</sup> The scoping review was chosen specifically to identify gaps in the current knowledge, scope the current body of literature, and to clarify the concept of cultural considerations relative to curriculum design and transfer. Of particular interest were transborder curriculum partnerships focused on SBE and involving health professions education including, but not limited to, medicine and nursing. The review team included individuals selected for their diverse backgrounds professionally, culturally, educationally, and geographically to determine what studies met the criteria to be a part of this study (Table 1). The authors were chosen to provide a global perspective based on their educational, professional, and national cultures both historically and currently to give a broad perspective to the analysis of the reviewed articles.

### Search Strategies

A systematic search of academic databases was electronically conducted of PubMed, Embase, Web of Science, and ERIC

databases. This list of search terms was developed through review of healthcare simulation literature and with guidance from peers in international and transborder health professions education. Search strings were further refined and translated to each database with the assistance of a Maastricht University Research Librarian (see Document, Supplemental Digital Content 1, <http://links.lww.com/SIH/A960>, literature review search string). Additional articles were included through incidental encounters and searches of reference lists from reviewed articles.

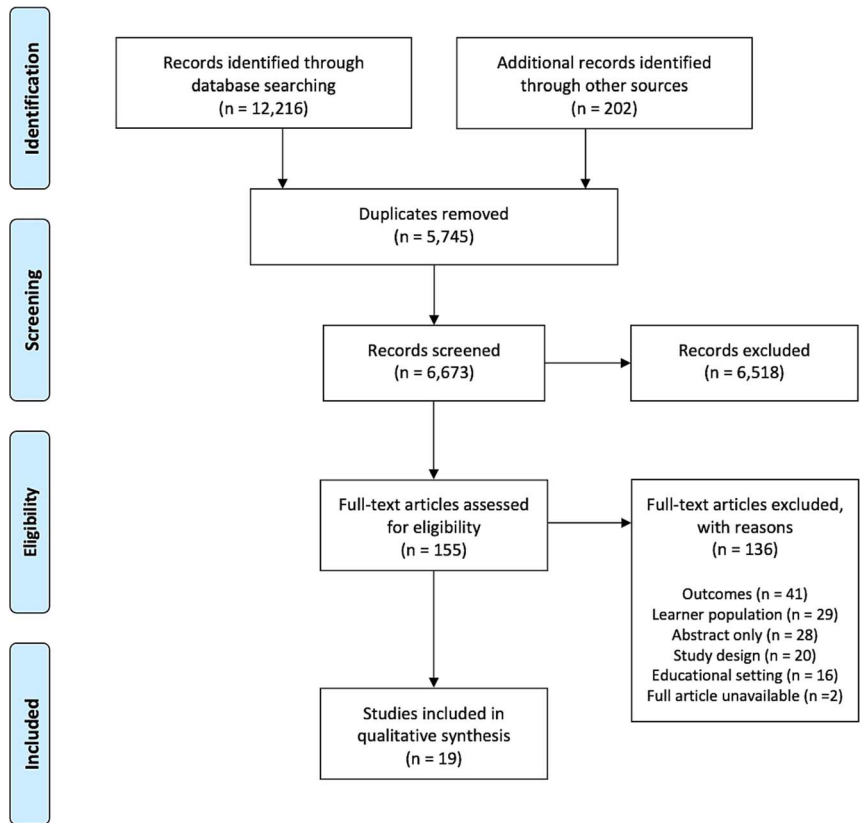
Results from individual database searches were exported in .RIS format and uploaded into Covidence (<https://www.covidence.org>) for literature review process. Covidence is an online platform used for managing many aspects of a literature review. The software allows for titles, abstracts, and full articles to be loaded to the software and reviewers to follow the described process online. The online portal then allows for exporting both Preferred Reporting Items for Systematic Reviews and Meta-Analyses data and data extracted from articles included for full review. Covidence removed identified duplicates before title and abstract review (n = 3527). Because of differences in naming and abbreviation methods between databases, additional duplicates were removed manually during title and abstract screening (n = 2218) (Fig. 1). Title and abstract review were divided among authors (M.C., M.A., H.Y.) requiring consensus of at least 2 authors for an article to be deemed irrelevant or to be moved forward to full-text review based on inclusion and exclusion criteria hereinafter. For disagreements on inclusion, consensus was reached through thoughtful discussion of each article among screening authors. Full-text articles were reviewed by one author for final extraction. During full-text review, some articles were revisited if the full text revealed that the article met exclusion criteria. Extraction was performed by one author (M.C.) with extraction results in Appendix 2 (see table, Supplemental Digital Content 2, <http://links.lww.com/SIH/A961>).

### Inclusion Criteria

Studies were included if written in any language, were peer reviewed, and were published from January 2016 to September 2020. This date range was selected to reflect the increase in transborder health professions curriculum partnerships in recent years. Studies' methodologies included qualitative, quantitative, and mixed methods study methodology. Matsumoto and Juang's definition for global culture was used to develop search criteria looking for cultural elements in the curriculum design and transfer process rather than the content and structure of the curriculum itself.<sup>15</sup> Articles that were focused on health professions education with a transborder curricular partnership element were included. Transborder curricular partnerships were defined as institutions with different geographical locations, both internationally and interregionally. In addition, articles were examined if they involved preparation for health professions work in different cultural contexts. Articles were also

**TABLE 1.** Backgrounds of the Authors

	Clinical	Professional	Geographical	Educational
M.C.	Paramedic	Simulation-based education	North America	North American European Asian
M.A.	Nonclinical	Health-professions education healthcare communication	Middle East Europe	Middle Eastern European
H.Y.	Nonclinical	Health professions education healthcare communication and consultation	Asia Europe	Asian European
W.v.M.	Physician	Health professions education critical care medicine	Europe	European



**FIGURE 1.** Covidence output of PRISMA flowchart for literature review process.

considered if they were primarily aimed to accept learners from different cultural and geographic backgrounds.

### Exclusion Criteria

Articles were excluded if they were not peer reviewed and if the subjects were not explicitly related to health professions education. Studies were excluded if the learner population was either prehealthcare education or postgraduate work. Studies were excluded if the cultural elements being discussed were anything other than ethnic, national, or geographic culture. Articles focused on cultural adaptations made by learners to their new living situation and not to the specific academic needs were also excluded. Articles focusing on the cultural differences between patients and learners were also excluded. No articles were excluded for being written in a language other than English. The primary reasons for studies being deemed irrelevant and excluded were learner populations beyond the scope of this review, clearly addressing cultural elements outside of national or ethnic culture, and studies focused on patient/learner cultural differences.

### Search Results

Upon completion of the search, 12,418 studies were imported for screening with 3527 duplicates being automatically removed. An additional 2218 studies were manually removed for being duplicate studies with the primary cause being different databases using slightly different abbreviations for different journals. Of all the findings, 6673 titles and abstracts were screened with 6526 studies deemed irrelevant. After abstract screening, 147 full-text studies were assessed for final eligibility

for extraction with 19 studies being included in final extraction. A graphic representation of these results is displayed in Figure 1.

### Data Extraction

Data extraction was performed in Covidence (<https://www.covidence.org>) using a custom data extraction template. Elements included for extraction were broken into the following 3 subheadings: general information, characteristics of studies, and cultural elements. Additional space was left for notes regarding each study. Results were further distilled into included tables with full extraction results included separately (see Table, Supplemental Digital Content 2, <http://links.lww.com/SIH/A961>, extraction table results).

### Synthesis

Results reported in the extraction table were weighed against the constructs present in the Process of Cultural Competence in the Delivery of Healthcare Services.<sup>13</sup> This model was designed with the intent to categorize knowledge and actions into elements meant to aid healthcare professionals in delivering culturally sensitive and competent care to their patients. Using this model as a lens to further relate extracted findings from the literature review, authors discussed the relationship between the 5 constructs of the model and the themes identified in the extraction table. Initial synthesis was conducted by one author (M.C.) with asynchronous review from coauthors (M.A., W.v.M., H.Y.). Consensus was achieved through synchronous online conversation throughout the synthesis process.

### General Results

The extracted articles represented a broad cross-section of demographics and transborder curriculum relationships. Despite

**TABLE 2.** Articles Extracted by Region

Region	No. Papers
Africa	3
Asia	10
Europe	7
North America	8
Oceania	2
South America	1
Worldwide	1

these global perspectives and no limit to language for inclusion, all articles for extraction were written in English.

### Region of Origin

The regional focus of home and host sites included sites from around the world (Table 2). Ten articles provided perspectives from what can be defined broadly as Asia, including Central Asia, Southern Asia, and the Middle East.<sup>10,18,19,22–28</sup> Eight articles gave insight from a North American angle.<sup>16,19,25,26,28–31</sup> Seven articles had elements of a European perspective.<sup>10,17,18,24,29,31,32</sup> Three articles gave insight into projects that had some element on Africa.<sup>17,24,33</sup> Two articles had institutions based in Oceania.<sup>27,34</sup> One article provided a view of South American implementation.<sup>30</sup> One article tried to reach a “global curriculum” and specifically tried to include perspectives from around the world.<sup>11</sup>

### Perspective and Environment

Among the included articles, various combinations of the institutional structure were represented in multisite programs and home versus host experiences were represented. Seven articles included elements from the view of both home and host institutions.<sup>23,24,26,29,32–34</sup> Six articles focused on a single site institution in the host context.<sup>10,19,22,27,28,31</sup> Two focused on single site institutions in the home context.<sup>16,25</sup> Three articles gave information on multisite institutions in the host context.<sup>17,18,30</sup> One article did not specifically define the sites it was considering as it was looking to create a specifically global curriculum.<sup>11</sup> None of the articles focused on home institutions with multiple sites.

### Curriculum Content

In the process of examining these relationships, 3 distinct elements seemed to flow directionally or between the institutions: curriculum, modality, or learner. Most prevalent, in 12 articles, was the transfer of curriculum from home to host.<sup>10,11,17–19,22,24,26–28,30–34</sup> Of those 12, 5 articles included specific references to the bilateral exchange of curriculum.<sup>11,24,26,30,32</sup> Four articles set out to design a “global” or “international curriculum” from the outset.<sup>11,29,32,33</sup> Three articles described moving a modality to a host context.<sup>18,27,31</sup> Meanwhile, only one

article described the adaptation of a modality from a host context to a home context.<sup>26</sup> Finally, one article each described adaptations where the modality or curriculum remained in place, but the learner transferred to the site of an adapted curriculum.<sup>16,34</sup> For instance, students traveling abroad to study at a university specifically aimed at international students.

When examining the descriptions of the role that culture played in the adaptation of the curriculum, only one article used a specific definition of culture.<sup>19</sup> However, 2 articles described some sort of cultural competency model.<sup>19,26</sup> Wilbur et al<sup>19</sup> explicitly used Hofstede's definition of culture and Hofstede's 6 dimensions of culture as a framework to study the feedback methods used between Western and Middle Eastern contexts.<sup>26,35</sup> San et al<sup>26</sup> used Jeffrey's Cultural Competence and Confidence model in their development of standardized patient encounters in the United States and Turkey.<sup>36</sup>

### Categorical Results

Among all the extracted articles, common categories of particular focus of the adaptation of the various curricula arose. These categories formed threads among the articles and the efforts to adapt curricula in these transborder relationships and will be further discussed in subsequent sections. A synopsis of the results can be found in Tables 3 and 4.

#### 1. Learners

Several articles described cultural elements of the learner population within their studies and what needed to be considered in the new or “transferred to” educational context.

#### 2. Faculty

Approximately one third of the extracted articles recognized points of contact with faculty that needed to be addressed in the adaptation and implementation phases of their transfer. Outside of training, related to the functional needs of the curriculum and its transfer, several studies recommended different types of diversity training to prepare faculty for their learner populations.

#### 3. Interpersonal communication

As with any interpersonal interaction, communication presents unique barriers to collaboration and adaptation surrounding the simulation curriculum. Communication was included as a thread through many of the previously mentioned themes.

**TABLE 3.** Intersections of Identified Themes and Categories Found in the Process of Cultural Competence

Identified themes	Campinha-Bacote Themes	Cultural Awareness	Cultural Knowledge	Cultural Skill	Cultural Encounters	Cultural Desire	Cultural Fidelity (Not Originally C-B)
Learners		2	2	1	2	0	2
Faculty		0	1	0	2	0	0
Interpersonal communication		2	4	4	3	1	0
Prior experience of individuals		3	1	3	4	0	3
Curriculum adaptation—broadly		2	5	3	4	2	1
Curriculum adaptation—matching content		0	3	0	3	2	1
Curriculum adaptation—partnership		1	4	2	5	2	2
Fidelity		1	5	2	4	2	

**TABLE 4.** Categorical Results by Article

Study ID	Learner	Faculty	Interpersonal Communication	Prior Experience	Curriculum Adaptation—Broadly	Curriculum Adaptation—Matching Chronologically Near Content	Curriculum Adaptation—Partnership	Fidelity
AlBuali and Khan <sup>22</sup> (2018)			Establish clear priorities			Not only consider curriculum on either side, but to consider the educational experiences and background of both faculty and learners		
Baker et al <sup>29</sup> (2021)				Start with both local and international standards looking to the collaboration to mitigate differences		Use formal methods of reaching consensus such as the Delphi processes		
Berland <sup>3</sup> (2017)		Deliberate training for faculty		Involve local faculty in the transfer and implementation	Start with local regulations and standards of practice	Consider local resource availability for education and in the anticipated care environment		
Christmals and Armstrong <sup>35</sup> (2020)		Plan to have entirely local faculty implementing and localizing transferred curricula		Experience contributed by any faculty might be directly from experience with the local culture, but other intercultural experience could also be valuable when preparing to adapt curricula				
García de Leonardo et al <sup>32</sup> (2016)			Bidirectional communication among anyone involved in the transborder partnership	Value of an individual having had direct experience with the culture of learners and patients on the receiving end of the curricula		Consider local resource availability for education and in the anticipated care environment	Co-development through reaching a consensus between local experts and experts in the field being taught	Need to adapt cases to the local experiences
Deb et al <sup>24</sup> (2019)			Use iteration, repetition, reflection, and potentially anonymity to allow for the full and honest transfer of feedback and input	Involve local faculty in the transfer and implementation	Use a global design with specific space left for localization		Use formal methods of reaching consensus such as the Delphi processes	

**TABLE 4. (Continued)**

Study ID	Learner	Faculty	Interpersonal Communication	Prior Experience	Curriculum Adaptation—Broadly	Curriculum Adaptation—Matching Chronologically Near Content	Curriculum Adaptation—Partnership	Fidelity
Giuliani et al <sup>11</sup> (2020)							Use an interview and consensus process so that diverse perspectives can be specifically sought out to ensure a true representation of needs	Diverse perspectives and voices must be sought out during the adaptation of these curricula to ensure representation of the future practice environment and reality
Greenberg et al <sup>16</sup> (2016)		Faculty need specific training and experience related to the predominant culture of the learners		Value of an individual having had direct experience with the culture of learners and patients on the receiving end of the curricula				
		Faculty training, broadly						
		Faculty must be knowledgeable in the culture of their learners as well as their students' future patients						
Lake et al <sup>30</sup> (2017)					Use a set of standards as the intermediary for both sides to create the new localized curriculum		Map the curricula of both sides of the partnership and compare those maps to find convenient touch points	
Levine et al <sup>25</sup> (2017)	Consider the educational background of the learners before transferring and during the adaptation of their curriculum					Not only consider curriculum on either side, but consider the educational experiences and background of both faculty and learners		
Mackay et al <sup>34</sup> (2016)				Faculty with intercultural experiences other than with the local culture would be valuable and interviewing stakeholders and local faculty and staff would be sufficient to give the insight to adapt the curriculum	Start with international standards		Interviews with local experts and stakeholders might be sufficient to gain this insight	
Rashid et al <sup>17</sup> (2019)					Start with local regulations and standards of practice			
					Multiple facets of culture need to be considered in the curriculum adaptation process			

Riklifs et al <sup>18</sup> (2018)	Faculty training, broadly	Bidirectional communication among anyone involved in the transborder partnership	Start with international standards	
	Faculty need to be trained to the same standards as their anticipated learners to ensure that the faculty had the same practice standards in mind between them		The objectives of the curriculum should be the starting point for adaptation	
San et al <sup>26</sup> (2021)	Consider the educational background of the learners before transferring and during the adaptation of their curriculum			Need to adapt cases to the local experiences
Sparkes et al <sup>27</sup> (2016)	Learners provide feedback, but only positive feedback	Bidirectional communication among anyone involved in the transborder partnership		Standardized clinical activities and psychomotor skills require less adaptation than more context dependent elements like interviewing or feedback
	Faculty need specific training and experience related to the predominant culture of the learners			
	Faculty beliefs about learner culture need to be explored before implementation and that the best way to do this would be to prepare faculty to learn about their culture from the learners directly	Explicitly make intercultural dialog and sharing part of the transfer process		
	Faculty training, broadly			
	Faculty need specific training to be able to develop and adapt to the cultural makeup of any group of learners			
Waldorf et al <sup>1</sup> (2016)	Essential to recognize that learners may represent different intersections of cultural elements and that they should be accounted for as individuals rather than cultural constructs		Multiple facets of culture need to be considered in the curriculum adaptation process	Everything possibly contributes, or detracts from, the fidelity of the experience
Waterval et al <sup>10</sup> (2017)	Faculty need diversity training	Bidirectional communication among anyone involved in the transborder partnership	Needs assessment of the local learners and community is essential as a starting point	Explicating cultural views and assumptions from the outset is essential



**TABLE 4. (Continued)**

Study ID	Learner	Faculty	Interpersonal Communication	Prior Experience	Curriculum Adaptation—Broadly	Curriculum Adaptation—Matching Chronologically Near Content	Curriculum Adaptation—Partnership	Fidelity
Wilbur et al <sup>19</sup> (2017)	Learners less likely to give feedback to one another or to faculty about the curricular content or experience	Faculty need training in theory and pedagogy to facilitate localization and implementation of adapted curricula	Buy-in on both sides of the project was essential from the beginning				Begin at the beginning and end with objectives and assessment measures	
Ziganshin et al <sup>28</sup> (2017)			Understanding of one another's culture could help facilitate the sending and receiving of feedback during the transfer of the curricula				Need to co-develop curricula in these transborder relationships	

During these partnerships, communication issues may present barriers at many points in the process of curriculum transfer and to the success of the endeavor overall.

4. Prior experience of individuals

Another category that recurred in the extracted articles was the desire to involve individuals with local experience in the process of curriculum development and/or transfer. This experience might be in the healthcare environment, the educational environment, or more broadly with the surrounding cultures of the learners and other faculty.

5. Curriculum adaptation—broadly

Several articles touched on a starting point for a specific process of curriculum adaptation or development rather than factors surrounding the process. For instance, starting with local curricular or practice requirements of the host institution or international standards of practice.

6. Curriculum adaptation—matching chronologically near content

Several articles suggested that it was essential to consider educational content of the greater curricular program (course, training program, etc) that precedes and follows any adapted curricular elements for simulation. What learners are being taught and experiencing before one adapted simulation might specifically change what objectives and expectations were important in the adapted curriculum.

7. Curriculum adaptation—partnership in adaptation

A few articles also included that curriculum adaptation was more a co-development of a new curriculum than truly an adaptation of the original curriculum. Many articles also suggested that formalized processes of curriculum development and adaptation would be integral to the success of the partnerships and the adaptation of these curricula.

8. Fidelity

The final category that continued to emerge is of particular interest to SBE, fidelity or realism. Generally, the need for the simulation to reflect the physical and conceptual reality of where the learners would be practicing and the specifics of that practice (procedures, equipment used, methods, cultural considerations of care, etc) is essential to create a SBE that translates to practice.

**Intersections of Campinha-Bacote Model and Categorical Results**

Within the process of cultural competency in the delivery of healthcare services, there are 5 themes that are described. In addition to the 5 themes proposed, one additional theme continued to appear among many of the articles in the scoping review, the theme of fidelity.<sup>13</sup> Fidelity is defined as “the degree to which the simulation represents the real event and/or workplace....”<sup>37</sup> While the theme of fidelity is not in the model, it plays an important role in curriculum adaptation (see hereinafter).

Considering the categories found in the included articles and examining them through the lens of the Campinha-Bacote

model of the process of cultural competency provides further depth to understanding what elements are useful in preparing for and adapting simulation curriculum in transborder curriculum partnerships. Comparing the categories in the articles and the themes from the cultural competency model by Campinha-Bacote showed significant overlap (Table 3).

1. Cultural awareness is a matter of self-examination and in-depth exploration of one's own cultural background.

This theme was evident throughout the faculty, learners, and curriculum adaptation categories.

2. Cultural knowledge is seeking and obtaining a sound educational foundation for diverse cultural and ethnic groups.

This theme is woven throughout nearly every category identified in this scoping review but specifically rises out of the categories of interpersonal communication, prior experience, curriculum adaptation, and fidelity.

3. Cultural skill is the ability to collect relevant cultural data.

In Campinha-Bacote's model, this relates to collecting information from patients. In the curriculum adaptation process, this theme could be transposed to the ability to accurately collect and describe information related to the culture of learners and surrounding their future practice environments. This theme surfaces in both the curriculum adaptation and fidelity categories in the needs described in collecting this information.

4. Cultural encounters encourage the healthcare provider to directly engage in cross cultural encounters.

In the simulation curriculum adaptation process, this is largely inevitable; however, these encounters are essential in every category identified in this scoping review.

5. Cultural desire is the motivation to want to engage in this process.

While it is hard to define and quantify cultural desire, this rises in the interpersonal communication category while discussing buy-in and looking at obstacles and opportunities that arise in the process. In addition, the desire may be determined at different stages of the process, in different ways, and by different stakeholders on both sides of the adaptation.<sup>4</sup> This variability in motivating factors may be driven by confounding factors such as broad aspiration, project mission and vision, and even leadership.

6. Cultural fidelity, though not a part of the Campinha-Bacote model, is the relationship between the created simulation activity and the cultural context being portrayed.

Fidelity, more so than in many other types of health professions education, is essential to SBE. The current definition of fidelity in simulation specifically includes environmental, functional, psychological, and often conceptual fidelity.<sup>37</sup> In the process of curriculum adaptation, it becomes important to consider a thread of fidelity that runs among these other types of fidelity, which is "cultural fidelity."

## DISCUSSION

In summary, each of the articles provided some insight into what elements were explicitly considered in their respective curriculum partnership or adaptation. These insights follow general categories relating to learners, faculty, interpersonal communication, prior experience of the adaptors, fidelity, and curriculum adaptation generally, within the contexts of other curricula, and the partnership surrounding the adaptation. These categories provide a broad swath of clues as to how one might best approach the adaptation of curriculum in transborder partnership.

What is missing from the articles and individual data points is an overarching context to position these categories in such a manner that allows for a more generalizable and scalable approach to adapting curriculum in these transborder partnerships.

All these categories surround one central tenet, that of consensus. For these relationships to be successful and for the transferred, adapted, or developed curricula to be valuable, it is essential that every side of these partnerships be engaged and contribute directly and actively to this process. Through this review, it was clear that to reach this consensus, 3 things were eminently important. The first was that there should be common goals, objectives, and definitions. The second was that there should be a clear process whereby the adaptation takes place and culture is factored in. Finally, the goal is to produce experiences that reflect the reality of the future practice environment.

There are several definitions of culture that exist in the world. Some focus on national or ethnic culture, others on professional culture, and still others on nearly any element of identity one might choose to consider. In transborder education partnerships, any of these definitions are appropriate. In this review, specific attention was paid to ethnic or national culture as a clear starting point when considering an adaptation of curriculum between geographical and therefore national or ethnic cultural contexts. Starting with a shared definition of what is being accommodated in the adaptation is critical.

In this review, while limited to cultural or ethnic cultural definitions, very few articles explicated the definition of culture that was being used. This led to several different and sometimes conflicting approaches being considered as successful. Even without common definitions, however, many of these articles pulled together worldwide and diverse perspectives and described barriers and successes that were encountered. Starting with a definition of culture and a focus on what considerations should be examined may simplify the process and lead toward earlier consensus and collaboration.

In addition, it was clear that the definition of culture might result in different considerations depending on what was being adapted. Learners crossing geographical and cultural boundaries, curricula being adapted and transferred between locations, and even modalities being transferred between sites within an institution may require different cultural considerations in the adaptation process. Understanding the relationship between culture and different types of simulation and different transborder relationships may have an impact on what adaptations are made or not made.

In SBE, it is broadly accepted that having some proscribed process is the best practice in simulation curriculum design.<sup>38</sup> What becomes clear from this scoping review is that there should also be some structured process for culturally adapting

simulation-based curricula in transborder healthcare education partnerships.

### Expanding the Process of Curriculum Design

Recommendations on how to truly enhance the curriculum design and adaptation process are somewhat limited, but the articles included in this scoping review provide some guidance for how and where to update the curriculum design process (Table 5).

#### 1. Cultural awareness

While the goal may be cultural awareness of the learners and their relationship to their patients, in curriculum design for SBE, significant work must be done by the faculty and curriculum designers to understand their own perspective and its relationship to the learners.

Training to acknowledge the educational background of the faculty and how this relates to teaching and learning is valuable here.<sup>25–27</sup> Additional awareness surrounding the different intersections of identity that make up an individual's culture can assist the learner in engaging as well as creating a valid learning environment.<sup>27</sup> Additional training and reflection for faculty on their attitudes and beliefs about the learner's culture and educational background have also shown value.<sup>27</sup> Finally, faculty awareness of training related to the culture that may exist in future practice environments of their learners can help in the adaptation of the curriculum as well as in facilitating learner integration of practices.<sup>16</sup>

#### 2. Cultural knowledge

Specific knowledge of the cultural backgrounds at play for the faculty, learners, and future patients is essential in adapting and implementing simulation curriculum. Giving faculty-specific training related to cultural norms and customs is essential to the transfer and adaptations of these curricula.<sup>16,27</sup> There is value in

general training and awareness surrounding cultural sensitivity and knowledge.<sup>16</sup> However, there seems to be more evidence for value in specific training related to the learning and practice environment of the host.<sup>10,23</sup> So much so that the end point should be a majority of faculty who are locally culturally integrated.<sup>23</sup> Overall, bidirectional knowledge sharing and collaboration have been consistently shown to be key.<sup>10,11,28,32</sup> Understanding this gap can then provide a fruitful bridge to connect faculty to learner or learner to patients.

#### 3. Cultural skill

Cultural skill as it relates to curriculum adaptation centers on learner-centered education and trying to meet the learner where they are in an educational sense. Using a learner-centered approach, the collaboration between learner and faculty creates the opportunity to have conversations on how observations found through cultural awareness may affect learning and healthcare experiences. Feeding off of cultural awareness and knowledge, there is distinct value in understanding behaviors related to learners' backgrounds, particularly related to learners engaging in reflection and giving feedback.<sup>19,27</sup>

#### 4. Cultural encounters

Cultural encounters are the crux of SBE. These experiences have an opportunity to be intentional in the skillset they elicit at cultural intersections.<sup>39</sup> Giving faculty both direct and indirect experiences related to learner culture and the culture of future patients can make incredible differences in the design and implementation of these curricula.<sup>34</sup> In health professions education, the faculty often have a professional background similar to their learners, and bridging this culturally can be key to assisting in learner-based simulation. Cultural experiences for faculty to match their training to the expected training of their

**TABLE 5.** Expanding Curriculum Design and Adaptation: What and When

Cultural Theme	Recommendation	When Should This Occur
Awareness	Bias training	Before collaboration, ongoing throughout
	Faculty development for broad awareness and context-specific cultural considerations	Before collaboration, ongoing throughout
	Active reflection on learner cultural background and anticipated patient cultural environment	Before collaboration, ongoing throughout
Knowledge	Faculty development for broad awareness and context-specific cultural considerations	Before collaboration, ongoing throughout
	Faculty development related to cultural sensitivity	Before collaboration, ongoing throughout
	Faculty development related to local customs and integration of local faculty	Problem identification, needs assessment
	Bidirectional collaboration of home and host faculty	Throughout the process
Skill	Faculty development around culturally sensitive facilitation, particularly debriefing	Before collaboration, ongoing throughout
Encounters	Choose faculty with prior multicultural experience	Before collaboration
	Give/choose faculty with direct experience with learner and future patient cultures	Before collaboration, during needs assessment
	Structured collaboration between home and host faculty	Ongoing throughout
	Explicit conversations and agreement on cultural assumptions and expectations of learners	Before collaboration, needs assessment, goals and objectives
Desire	Encourage bidirectional communication and collaboration	Ongoing throughout
	Set clear expectations, outcomes, goals, and objectives	Before collaboration, needs assessment, goals and objectives
Fidelity	Cultural awareness and implicit bias training	Before collaboration
	Objectives driven curriculum development	Needs assessment, goals and objectives
	Building upon the previous 5 elements	Ongoing throughout

learners, especially as it relates to cultural expectations is immensely valuable.<sup>18,23</sup> This can also be achieved through bidirectional planning and implementation with faculty who are local to the host context.<sup>33</sup> In addition, these encounters can be enhanced by starting with agreed upon standards, outcomes, goals, and/or objectives.<sup>10,30</sup>

#### 5. Cultural desire

Waterval et al<sup>4</sup> specifically discuss the value in spending time creating connections and shared vision among many stakeholders long before any curriculum is designed or implemented. This mixed with very specifically describing the goals of a program and what success looks like has the potential to create a great deal of buy-in and ultimately “desire.”<sup>22</sup> In addition, bilateral engagement between curriculum partners and other stakeholders in the futures of the learners is essential in maintaining a high level of desire and cooperative ability.

#### 6. Cultural fidelity

As a concept, cultural fidelity is somewhat new with little guidance on how to best create and maintain it. That said, the parity between real patients and patient care experiences and the simulation environment and simulated patients are clearly lynchpins in creating value in SBE. Patient-centered care and learner-centered education further underscore the value of creating this level of realism and then connecting these realistic environments to real practice is the best way to produce value in these experiences. Although there is limited guidance published on how to create this fidelity, one current thread is to continue to create bilateral and diverse collaborations surrounding this curriculum to avoid stereotypes and create the opportunity for the other 5 elements to translate to culturally sensitive healthcare delivery. In addition, engagement with local faculty and an exploration of what cultural “reality” looks like for local patients can be exceedingly valuable.<sup>27</sup> Through the 5 main elements of the model, there is significant opportunity to pull elements in to enhance the fidelity of the simulation and add to the validity and value of the learning experience.

### Where and When

The other element to consider in connecting this model of cultural competency with the curriculum design process is where and when to connect these elements. Through the various categories identified, it was evident that much of the cultural adaptation needs to occur early in the curriculum design process and some of it may even need to occur alongside, separate, and before any actual curriculum work. Faculty and staff must engage in many of these elements before the process of curriculum design or adaptation has begun. Particularly building cultural awareness, skill and desire need to happen early and often, before and during the process of working with any curricula. Cultural knowledge, some elements of skill, and cultural experience may be necessary elements of problem identification or needs assessment. Either way, these things must be integrated early in the process to sufficiently affect the rest of the design process and produce a culturally relevant and applicable SBE.

Considering the definitions, the process of curriculum adaptation, and the needed fidelity for these experiences, more research needs to be done on the specific cultural themes, how they manifest in the adaptation process, and where in the curriculum design/adaptation process do they produce the most effect or play the greatest role.

### Strengths and Weaknesses of This Study

Strengths of this study include a focus on recent content for a growing trend in transborder curriculum partnership and an exploration of what is currently being recommended in considerations for cultural adaptation of health professions curriculum. In addition, a novel focus on experiential learning with an eye toward simulation has not been widely discussed. Finally, a new lens on this growing topic using established tools and theoretical frameworks has not been previously applied to transborder simulation curriculum development.

Limitations of the study include a relatively small number of relevant studies because of the focus and recent attention given to this topic. In addition, cultural competency models are focused more on patient care than on curriculum, so the comparison of curriculum design and cultural competency models is somewhat incomplete without further input from subject matter experts with experience in transborder curriculum partnerships focused on simulation.

### CONCLUSIONS

This scoping review highlights the fact that cultural elements related to a formal process of curriculum adaptation are essential for transborder simulation curriculum adaptation. The results also demonstrate that while there is a clear relationship between categories identified in the literature review and in the Campinha-Bacote model of cultural competency, the relationship between cultural elements discussed in each can only be understood at a surface level without specific further study into how each of the themes from the model relates to current and best practice in transborder curriculum adaptation.<sup>13</sup> Finally, the exposure of fidelity as a focus for the adaptation of simulation curriculum in health professions education has significant implications for this process as an extension of the Campinha-Bacote model as a lens for curriculum design.

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